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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SHERMAN, STEPHEN G

ART UNIT PAPER NUMBER

2674

DATE MAILED: 12/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/649,615	Applicant(s) CHEN, CHRIS	
	Examiner Stephen G. Sherman	Art Unit 2674	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

Page 4 of the specification recites: "The programmable step motor (20) has a driving..." The examiner suggests changing the sentence to read: "The programmable step motor (2) has a driving..."

Appropriate correction is required.

Claim Objections

2. Claims 7 and 15 are objected to because of the following informalities: The claim reads: "...wherein al long hole is adapted..." The examiner suggests changing this to read: "...wherein a long hole is adapted...". Appropriate correction is required.

3. Claims 13-16 are objected to because of the following informalities: copy and paste error. The applicant states in claim 9 that the programmable motor drives the lens to move relative to the backboard, however, in each of the claims 13-16 the applicant states that the motor drives the backboard to move relative to the lens as already claimed in claims 5-8. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 3 and 11 recite the limitations "the first elongated holes" and "the second elongated holes." There is insufficient antecedent basis for this limitation in the claims.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 1-4 and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shankle et al. (US 6,195,016) in view of Chae (US 2002/0097216) and further in view of Jaynes (US 6,633,276).

Regarding claim 1, Shankle et al. disclose a transmission device for a two dimensional (2D) image display module (Figure 1) having a box with a top opening, a lens received in the box (Figure 2, item 24) and a backboard (Figure 2, item 22) sandwiched between a bottom face defining the top opening of the box and the lens (Figure 2 displays the contents of the display 10 contained in the housing shown in Figure 1. The examiner interprets that the top opening of the box would be where the display 12 shows through as shown in Figure 1), the transmission device comprising:

a programmable motor driving the lens to move relative to the backboard (Figure 2, item 34 and column 4, lines 63-66);

whereby the lens is able to be moved in a pre-programmed manner such that images in the 2D image display module are able to be presented in a desired manner (Column 5, lines 18-24).

Shankle et al. fails to teach of a transmission device comprising a motor adapted to be mounted on the bottom face of the box for driving the backboard to move relative to the lens.

Chae discloses a transmission device (Figure 1, item 1) comprising a motor adapted to be mounted on the bottom face of the box for driving a support to move relative to a transparent plate (Paragraph [0023] and [0027]. The examiner interprets

that with the replacement of the solenoid with the motor, the motor would have to be mounted to the support or housing of the device in order to allow for the movement of the support.).

Therefore it would have been obvious to "one of ordinary skill" in the art at the time the invention was made to mount the programmable motor taught by Shankle et al. to the housing of the device to support the movement of the backboard relative to the lens as taught by Chae in order to avoid the necessity of a user moving with respect to the device to view a plurality of different images.

Shankle et al. and Chae fail to teach of a transmission device comprising a securing member adapted to be formed on a bottom face defining the top opening of the box for securing the backboard and the lens.

Jaynes discloses a display device comprising a securing member adapted to be formed on a bottom face defining the top opening of the box for securing the display (Figure 2, items 104, 105 and 106 are securing the display to the housing 102).

Therefore it would have been obvious to "one of ordinary skill" in the art at the time the invention was made to have a securing member as taught by Jaynes located on the bottom face of the box taught by the combination of Shankle et al. and Chae in order to allow for the lens and backboard to be secured to the housing.

Regarding claim 9, Shankle et al. disclose a transmission device for a two dimensional (2D) image display module (Figure 1) having a box with a top opening, a lens received in the box (Figure 2, item 24) and a backboard (Figure 2, item 22)

sandwiched between a bottom face defining the top opening of the box and the lens (Figure 2 displays the contents of the display 10 contained in the housing shown in Figure 1. The examiner interprets that the top opening of the box would be where the display 12 shows through as shown in Figure 1), the transmission device comprising:

a programmable motor driving the lens to move relative to the backboard (Figure 2, item 34 and column 4, lines 63-66);

whereby the lens is able to be moved in a pre-programmed manner such that images in the 2D image display module are able to be presented in a desired manner (Column 5, lines 18-24).

Shankle et al. fails to teach of a transmission device comprising a motor adapted to be mounted on the bottom face of the box for driving the backboard to move relative to the lens.

Chae discloses a transmission device (Figure 1, item 1) comprising a motor adapted to be mounted on the bottom face of the box for driving a transparent plate to move relative to a support (Paragraph [0023] and [0027]. The examiner interprets that with the replacement of the solenoid with the motor, the motor would have to be mounted to the support or housing of the device in order to allow for the movement of the transparent plate.).

Therefore it would have been obvious to "one of ordinary skill" in the art at the time the invention was made to mount the programmable motor taught by Shankle et al. to the housing of the device to support the movement of the lens relative to the

backboard as taught by Chae in order to avoid the necessity of a user moving with respect to the device to view a plurality of different images.

Shankle et al. and Chae fail to teach of a transmission device comprising a securing member adapted to be formed on a bottom face defining the top opening of the box for securing the backboard and the lens.

Jaynes discloses a display device comprising a securing member adapted to be formed on a bottom face defining the top opening of the box for securing the display (Figure 2, items 104, 105 and 106 are securing the display to the housing 102).

Therefore it would have been obvious to "one of ordinary skill" in the art at the time the invention was made to have a securing member as taught by Jaynes located on the bottom face of the box taught by the combination of Shankle et al. and Chae in order to allow for the lens and backboard to be secured to the housing.

Regarding claims 2 and 10, Shankle et al., Chae and Jaynes disclose the transmission device as claimed in claims 1 and 9. Jaynes also discloses of a display unit with elongated holes formed in the display (Figures 2 and 3, items 107. The examiner interprets that since the device is tilted at an angle while the securing device is stationary, as shown in Figure 2, that the holes facilitating the connection of the securing members would need to be elongated in order to allow for tilting of the device to occur.).

Regarding claims 3 and 11, Shankle et al., Chae and Jaynes disclose the transmission device as claimed in claims 1 and 9. Jaynes also discloses wherein the securing member has securing rods (Figure 2, items 105) adapted to extend from the bottom face of the box (Figure 2, item 105 extends from housing 102), the securing rods extend through the elongated holes such that the display is secured relative to the box (Figure 2, it can be seen that the securing members 105 extend through holes in the display to connect the display and housing together.).

Regarding claims 4 and 12, Shankle et al., Chae and Jaynes disclose the transmission device as claimed in claims 2 and 10. Jaynes also discloses wherein the securing member has securing rods (Figure 2, items 105) adapted to extend from the bottom face of the box (Figure 2, item 105 extends from housing 102), the securing rods extend through the elongated holes such that the display is secured relative to the box (Figure 2, it can be seen that the securing members 105 extend through holes in the display to connect the display and housing together.).

9. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shankle et al. (US 6,195,016) in view of Chae (US 2002/0097216) and further in view of Jaynes (US 6,633,276) and Leuthesser (US 4,459,587).

Regarding claims 5 and 13, Shankle et al., Chae and Jaynes disclose the transmission device as claimed in claims 1 and 9.

Shankle et al., Chae and Jaynes fail to teach of the transmission device wherein the programmable step motor has a disk securely connected to a motor shaft extending out of the programmable step motor, an eccentrically formed driving rod on the disk extendable through the backboard and the lens such that the programmable step motor is able to drive the backboard/lens to move relative to the lens/backboard.

Leuthesser discloses of a motor (Figure 2, item 30) that has a disk securely connected to a motor shaft (Figure 2, item 80) extending out of the motor, and an eccentrically formed driving rod (Figure 2, item 78) on the disk that extends through a rotation member to provide movement (Column 4, lines 16-35).

Therefore it would have been obvious to "one of ordinary skill" in the art to use the motor taught by Leuthesser in place of the motor taught by the combination of Shankle et al., Chae and Jaynes in order to provide improved means for moving the backboard/lens relative to the lens/backboard.

Regarding claims 6 and 14, Shankle et al., Chae and Jaynes disclose the transmission device as claimed in claims 4 and 12.

Shankle et al., Chae and Jaynes fail to teach of a transmission device wherein the programmable step motor has a disk securely connected to a motor shaft extending out of the programmable step motor, an eccentrically formed driving rod on the disk extendable through the backboard and the lens such that the programmable step motor is able to drive the backboard/lens to move relative to the lens/backboard.

Leuthesser discloses of a motor (Figure 2, item 30) that has a disk securely connected to a motor shaft (Figure 2, item 80) extending out of the motor, and an eccentrically formed driving rod (Figure 2, item 78) on the disk that extends through a rotation member to provide movement (Column 4, lines 16-35).

Therefore it would have been obvious to "one of ordinary skill" in the art to use the motor taught by Leuthesser in place of the motor taught by the combination of Shankle et al., Chae and Jaynes in order to provide improved means for moving the backboard/lens relative to the lens/backboard.

Regarding claims 7 and 15, Shankle et al., Chae, Jaynes and Leuthesser disclose the transmission device as claimed in claims 6 and 14. Although the combination of Shankle et al., Chae, Jaynes and Leuthesser fail to explicitly teach of a transmission device wherein a long hole is adapted to be defined in the backboard/lens to correspond to the driving rod and a hole is adapted to be defined in the lens/backboard to correspond to the driving rod, thereby the eccentrically formed driving rod is able to drive the backboard/lens to move linearly relative to the lens/backboard, since Chae does teach of moving the support linearly relative to the transparent plate (paragraph [0023]) and also suggests of using a motor to accomplish it (paragraph [0027]), with the combination of Shankle et al., Chae, Jaynes and Leuthesser, it would have been obvious to "one of ordinary skill" in the art at the time the invention was made that there would be holes in the backboard and lens to connect the motor to them to help facilitate the linear motion of the backboard/lens relative to the lens/backboard.

Regarding claims 8 and 16, Shankle et al., Chae, Jaynes and Leuthesser disclose the transmission device as claimed in claims 7 and 15. Although Shankle et al., Chae, Jaynes and Leuthesser fail to explicitly teach of a transmission device wherein each of the first elongated holes of the backboard/lens has a dimension smaller than that of each of the second elongated holes of the lens/backboard such that after the driving rods extend through the first and second elongated holes, movement of the backboard/lens relative to the lens/backboard is linear, it would have been obvious to "one of ordinary skill" in the art at the time the invention was made to make one pair of the holes larger than the others because if they were the same size the backboard or the lens would not move relative to the other.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen G. Sherman whose telephone number is (571) 272-2941. The examiner can normally be reached on M-F, 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on (571) 272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2674

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



PATRICK N. EDOUARD
SUPERVISORY PATENT EXAMINER

SS

6 December 2005